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None

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Defense Support Program (DSP) Improvements Status

24 APR 1979

1. Information on the Defense Support Program (DSP) is for U.S. personnel only. To preclude discussion on this program in the presence of Canadians at the Monthly Management Review briefing, a Staff Summary will be forwarded prior to each monthly briefing, or as required, to inform you of the most current status of the DSP Improvements areas.

2. Satellite Development. Satellites 10 and 11 have been delivered to SAMSO. ^{b1} and will replace Satellite 9 (Flight 7) currently located over the Pacific. Satellite 9 will be moved to the Eastern Hemisphere to replace Satellite 3 (Flight 2). Satellites 12 and 13 are in production and will be delivered to SAMSO in FY80 and FY81 respectively after retrofit with an ^{b1} and the Titan 34D Inertial Upper Stage (IUS) compatibility modifications. These satellites (10, 11, 12 and 13) have the following major improvements: a high powered downlink which increases signal power from 1.6 watts on current satellites to 20 watts for use with smaller ground antennas; a new system (CI-1) which will allow secure anti-jam commanding to the satellite; ^{b1}

The next major satellite change is referred to as the Sensor Evolutionary Development (SED) Program. These satellites will have all of the above improvements in addition to: a focal plane that increases the infrared cells from 2000 to 5760 ^{b1}

Satellites 5 and 6 are currently being retrofitted with SED and Satellite 14 will be a new satellite. Modified SED Satellites 5 and 6 will be delivered in second quarter FY82. These satellites will also be compatible with the Space Shuttle IUS.

3. Simplified Processing Station (SPS). ^{b1}

acceptance by SAMSO (DD250) - 20 Dec 78; maintenance training completed - 6 Apr 79. The remaining schedule is as follows: IOT&E commenced 16 Apr 79 for 60 days with an option to extend 15 days. A Memorandum of Agreement (MOA) for transitioning the SPS to ADCOM on 1 Jul 79 is presently being coordinated. IOC Oct 79. The prototype SPS is currently located on a temporary site at ^{b1} The permanent site is projected for completion in late Sep 79.

4. Mobile Ground Terminals (MGTs). The DSP Program Management Directive (PMD) dated 22 Nov 78 directs AFSC and ADCOM to "conduct an analysis to determine the feasibility of a mobile receiving terminal to enhance data survivability." As a result of this analysis, a new concept for DSP ⁶¹ data survivability has emerged and consists of deploying Mobile Ground Terminals (MGTs) and associated communications terminals in truck mounted vans that can change locations frequently ⁶¹

The MGT solution for long term data survivability enhancement was supported by Air Staff through their message dated 16 Feb 79. This message also stated non-support for five production SPSs. The FY80 budget and FY81-85 Program Objective Memorandum provides funds for one development model and five production models with a IOC goal of FY83. ADCOM is currently incorporating reviewer comments into a MGT System Operational Concept (SOC). SOC distribution is projected for Jun 79.

5. Ground Communication Network (GCN) Upgrade. SAMSO has developed a plan for upgrading the current GCN. The upgrade will integrate the OGS, OGS, prototype SPS, and users; ⁶¹

allow for additional sources/users and providing an uplink capability to airborne users. The Request-for-Proposal (RFP) was released by SAMSO on 20 Mar 79 with Technology Development Corporation, a minority contractor, being the sole recipient of the RFP. SAMSO is expecting to award the contract by Jun 79.

6. Large Processing Station (LPS) Computer Replacement. On 10 Oct 78, HQ USAF/RDS directed ADCOM, with AFSC support, to investigate several computer alternatives for solving the impact of the SED satellite's increased data load on ground station processing. Based on user requirements, costs, schedules, computer limitations, and future IBM 360/75 supportability problems, the study conclusion recommended a programmable preprocessor and a large software compatible computer be procured. On 9 Feb 79, HQ USAF/RDS (DSP PMD Change 14) directed AFSC to modify the LPS/SPS hardware/software for support of the evolutionary sensor, and replacement of the central processing units (CPUs) and preprocessors to preclude projected unsupportability of the current 360/75 system. PMD also directed that procurement would not be initiated until the CPU replacement is approved at HQ USAF. On 3 April 79, ADCOM asked SAMSO to provide their acquisition plan of attack and schedule. We understand SAMSO is planning to use one contract vice separate CPU and preprocessor contracts to comply with the AF/RDS direction. SAMSO has indicated to AFSC that the new PMD (Change 14) slips the schedule for achieving SED compatible ground stations by approximately 19 months: OGS SED compatible Nov 82 and OGS SED compatible May 83. This is due to the 27 month schedule required to develop the new preprocessors and not the computer procurement. The retrofitted SED satellites 5 and 6 are scheduled to be delivered to SAMSO in Mar 82 and Satellite 5 is projected for launch in early CY85.

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b1

The "Golden Point"

package is currently on contract with projected delivery in mid-July 79. Goal for on-line use of the above b1 Golden Point, b1 modifications is Oct/Nov 79.

ORIGINAL SIGNED

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